REMARKS/ARGUMENTS

Responsive to the Official Action mailed July 18, 2002, applicant has revised the claims of his application in an earnest effort to place this case in condition for allowance. Specifically, claims 2, 8, 9, and 11 have been canceled, claims 1 and 3 amended, and new claim 29 added. Reconsideration is respectfully requested.

By this response, applicant hereby affirms his election to prosecute the claims of Group I, namely claims 1-13. Applicant respectfully reserves the right to file one or more divisional applications directed to his non-elected claims.

In the Action, the Examiner rejected the claims under 35 U.S.C. §112, noting certain claim language considered to be indefinite. Care has been taken to revise the pending claims to address those issues noted by the Examiner. In this regard, it is respectfully noted that those skilled in the art will recognize that the term "tissue" encompasses a variety of different types of nonwoven substrates, typically comprising a high percentage of cellulosic wood pulp fibers, which are wet-laid to form a structure which may vary in density, depending upon the specific use. It is respectfully maintained that there is no inconsistency between claim 11, specifying that the recited "second layer" comprises substantially dry tissue, and the recitation in claim 1 that the second layer which comprises predominantly a high bulk, high loft, pulp fiber component. It is respectfully maintained that those skilled in the art will readily appreciate this preferred form of practice of the present invention.

Accordingly, it is believed that the rejection under 35 U.S.C. §112 can be withdrawn.

Applicant gratefully acknowledges the Examiner's indication of allowability of dependent claim 11. This claim has been canceled, and rewritten in independent claim form as new claim 29, which is believed to be in condition for formal allowance. Such action is respectfully solicited.

In rejecting the remaining claims under 35 U.S.C. §103, the Examiner has relied upon U.S. Patent No. 5,674,339, to Groeger et al., in view of either U.S. Patent No. 5,552,206, to Knoke et al., or U.S. Patent No. 5,375,306, to Roussin-Moynier, and further in view of U.S. Patent No. 5,874,159, to Cruise et al. The Examiner has further relied upon prior art formation techniques noted by the applicant in disclosing his unique, highly efficient process for formation of composite fabric. It is respectfully maintained that these references, even when considered in combination, do not teach or suggest applicant's admittedly novel process as claimed, and accordingly, the Examiner's rejections are respectfully traversed.

As discussed in the Specification, the present invention is directed to a highly efficient process for formation of a composite wipe structure, which includes a hydroentangled substrate web layer having predominantly staple length fibers, and a second layer predominantly having a high bulk, high loft pulp fiber component. In significant distinction from the prior art, both the substrate web layer and second layer

are provided with a lesser weight percentage of binder fibers. Efficient manufacture is promoted in a clearly unique fashion by *simultaneously drying and bonding the composite fabric structure*. Efficient formation in this fashion is neither taught nor suggested by the prior art.

In the Action, the Examiner has relied upon the principal Groeger et al. patent for its teachings relating to depositing first and second webs having binder fibers, and thermally bonding the webs together. However, the Examiner specifically acknowledges "Groeger et al. does not teach hydroentangling either of the 1st and 2nd non-woven webs before they are thermally bonded together." This is a very significant shortcoming in the teaching of the Examiner's principal reference, since the absence of this teaching clearly emphasizes that there would be *no motivation* to one skilled in the art to effect *simultaneous drying and bonding* of a composite web structure, as specifically set forth in the pending claims.

In this regard, the Examiner makes reference to the secondary Knoke et al. and Roussin-Moynier references. However, it is respectfully maintained that these references fail to overcome the clear deficiencies in the teachings of the principal Groeger et al. reference.

Knoke et al. is directed to "a method for manufacturing non-woven composite interlining fabric which is capable of being fused on by means of an adhesive

substance" (column 3, lines 46-48). As set forth in Example 1, this patent contemplates formation in the following fashion:

> A fleece was placed on a machine for random laying of fibers with 100% polyamide 6 fibers . . . .the fleece was bonded on a calender consisting of an engraved roller and a smooth roller at 200° C. to form a nonwoven fabric. On a Raschel machine having the capability of feeding non-woven fabric, this non-woven fabric was interwoven with a textured bicomponent warp thread made of polyamide. . . . .The composite fabric produced in this manner was treated without tension in a steam aggregate using saturated steam. In doing so, it turns out that the thread, which initially was almost inflexible, having an original extension length of about 20%, became elastic and exhibited an elongation of 80%.

The Examiner has made reference to the following discussion in Knoke et al.:

> A special softness is obtained when the non-woven fabric is bonded using water jets. Moreover, for obtaining an especially high internal strength, thermoplastic binding fibers can be included as well.

Taken in the context of this patent's disclosure, it is respectfully maintained that this reference language neither teaches nor suggest applicant's claimed method, including providing a hydroentangled web layer *containing moisture*, having predominantly staple length fibers and a lesser weight percentage of a first binder fiber component, and a second layer predominantly having a high bulk, high loft pulp fiber component, and a lesser weight percentage of a second binder fiber component. In absence of such teachings, this reference clearly cannot teach or suggest *simultaneously drying and bonding* the composite fabric structure.

Moreover, it is respectfully maintained that it *would not* be an obvious modification of Groeger et al. to include an entangled layer, as asserted by the Examiner. Groeger et al. is specifically limited in its teachings to "by gravity, distributing and entrapping in three-dimensions, sorptive particles of suitable size, shape, and weight within interiorly located spaces of said web structure, wherein said web structure is *dry formed*. Including a hydroentangled web substrate, *containing moisture*, would be contrary to the contemplated process of Groeger et al.

Applicant respectfully refers to M.P.E.P. Section 2143.01, which specifically requires that "the prior art must suggest the desirability of the claimed invention," and that "the proposed modification cannot render the prior art unsatisfactory for its intended purpose" (citations omitted).

For the same reason, it is respectfully maintained that it would not be obvious to modify the teachings of Groeger et al. in light of the Roussin-Moynier reference. Roussin-Moynier is specifically limited in its teachings to the formation of a homogeneous mixture of wood pulp and synthetic fibers, and not a composite fabric structure as claimed. Thus, there is not teaching or suggestion in this reference that it would be appropriate to modify one of the webs of the Groeger et al. disclosure, which specifically contemplates *dry forming* of the disclosed webs.

The deficiencies in the Groeger et al., Knoke et al., and Roussin-Moynier references are clearly not overcome by the Examiner's further reliance upon the Cruise

et al. patent. Again, there is no teaching in Cruise et al. which would teach or suggest to one skilled in the art that one of the *dry-formed* webs of the principal Groeger et al. patent should be replaced by a hydroentangled web containing moisture, in accordance with the present invention. Moreover, this reference does not contemplate the inclusion of a binder fiber component in each of two different types of web layers, as claimed, and thus it would not be obvious to one skilled in the art to consider the teachings of Cruise et al. in association with the principal Groeger et al. patent.

Rather, this patent contemplates formation of a nonwoven fabric having "a series of closely spaced, discrete globules of adhesive material enmeshed therein encompassing a plurality of fibers in each globule" (column 13, lines 53-57). As illustrated in Figure 3 of this reference, the provision of the claimed adhesive globules is effected by mesh bonding layers 61. Clearly, such a bonding arrangement has no relation to the use of thermally-activated binding fibers, in accordance with applicant's invention.

In the Action, the Examiner has asserted that "Groeger et al. is not restrictive to particular type of fibers making a composite fabric," but it is respectfully maintained that this reference fails to teach or suggest the provision of a layer predominantly having a high bulk, high loft pulp fiber component, configured for simultaneous bonding with a hydroentangled substrate webbed containing moisture, during drying of the hydroentangled layer.

The Examiner has further rejected the pending claims with consideration of applicant's acknowledged prior art practices. However, applicant must respectfully strongly disagree with the Examiner's assertions that it would be obvious to modify the prior art in accordance with the teachings of Groeger et al. As acknowledged by the Examiner, the prior art *did not* contemplate the inclusion of binder fibers. However, since Groeger et al. is specifically limited in its teachings to *dry forming* of the disclosed web structures, this reference *cannot* be properly relied upon for suggesting the incorporation of binder fibers in a hydroentangled web layer containing moisture. Again, M.P.E.P. Section 2143.01 specifically admonishes that "the proposed modification cannot render the prior art unsatisfactory for its intended purpose," and "cannot change the principle of operation of a reference."

In the Action, the Examiner asserted that "it would have been obvious in the art, motivated by the desire to simplify and reduce energy cost, to simultaneously activate binder fibers and dry the hydroentangled web," referencing the Roussin-Moynier reference. At column 4, lines 61 *et seq.*, Roussin-Moynier states:

> The oven heating conditions were selected to allow drying of the web and melting of the polyethylene of the synthetic fibers, though not melting of the polypropylene. In this manner the latter remained intact while bonding the fibers in contact with them.

Clearly, the teachings of this reference are specifically limited to treatment of a *single hydroentangled web layer*. Apart from applicant's own disclosure, there is no

teaching or suggestion to modify Groeger et al., or the acknowledged prior art practices, to effect simultaneous bonding and drying of a moisture-containing hydroentangled web and a dry high loft web each containing heat-activatable binder fibers.

In the Action, the Examiner has further rejected the pending claims under 35 U.S.C. §103, with consideration of applicant's acknowledged prior art, and the Groeger et al. patent. The Examiner acknowledges that the prior art practice "does not teach providing binder fibers to each nonwoven layer and then thermally activating the binder fibers to bond and stabilize the layers together." However, it is respectfully maintained that only applicant's own disclosure would suggest modifying this prior art formation technique in accordance with the teachings of Groeger et al., and even if so modified, such a combination would fail to teach or suggest applicant's method as claimed.

First, there is nothing in the teachings of Groeger et al. which would suggest employing the use of binder fibers in a hydroentangled substrate web, as claimed. This is a clear shortcoming in the combined teachings of the acknowledged prior art and Groeger et al. Moreover, these combined teachings *would not* lead those skilled in the art to recognize that simultaneous bonding and drying can be effected by providing a hydroentangled substrate web *containing moisture*, while depositing a *substantially dry* high loft web thereon, followed by heating to effect drying of the hydroentangled web, and binding of the composite structure.

While there is little question but that the diverse teachings of the prior art can be selectively combined to formulate a rejection under 35 U.S.C. §103, applicant must respectfully maintain that this is not a proper basis for rejecting the pending claims. Applicant's acknowledged prior art was identified to clarify the inventive nature of the present invention. Groeger et al. contemplates formation of a web structure having immobilized superabsorbent particulate material therein, with no teaching or suggestion of forming: 1) a hydroentangled substrate layer; 2) a high loft high bulk layer of predominantly pulp fibers; 3) depositing a substantially dry web layer on a substrate layer containing moisture; 4) simultaneously effecting drying and bonding of a composite structure; 5) use of the disclosed binder fibers in a construct not employing absorptive particles.

Again, M.P.E.P. Section 2143.04 specifically admonishes that the "fact that references can be combined or modified is not sufficient to establish *prime facie* obviousness," citing the Court of Appeals for the Federal Circuit which stated that although a prior art device "may be capable of being modified to run the way the apparatus is claimed, *there must be a suggestion or motivation in the references to do so*" (emphasis supplied; citation omitted). As is evident from applicant's specifically claimed process, the present invention is directed to more than the mere addition of binder fibers to a web structure, but rather to a specific set of processing conditions under which a composite fabric structure can be very efficiently formed.

In view of the foregoing, formal allowance of claims 1, 2-7, 10, 12-14, and 29 is believed to be in order and is respectfully solicited. Should the Examiner wish to speak with applicant's attorneys, they may be reached at the number indicated below.

The Commissioner is hereby authorized to charge any additional fees which may be required in connection with this submission to Deposit Account No. 23-0785.

Respectfully submitted,

By _____
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I hereby certify that this paper is being deposited with the United States Postal Service with sufficient postage at First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on **July 19, 2004**.

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